

# PATENT ABSTRACTS OF JAPAN

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(21) Application number : 09-255239 (71) Applicant : FUJITSU GENERAL LTD

(22) Date of filing : 19.09.1997 (72) Inventor : TAKAUCHI RYUJI

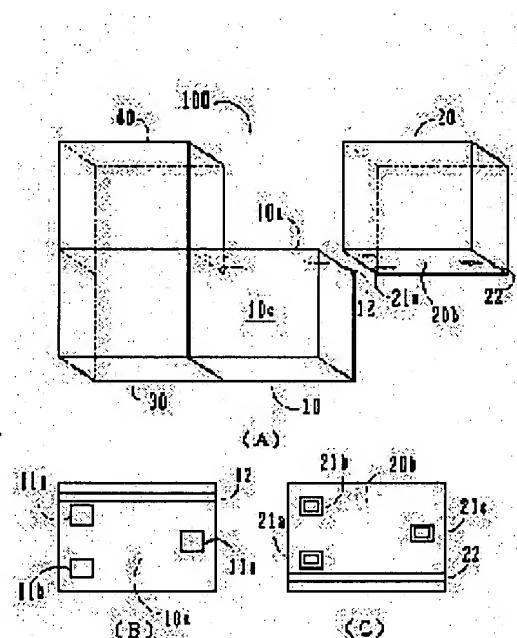
## (54) MULTISCREEN DISPLAY DEVICE

### (57) Abstract:

**PROBLEM TO BE SOLVED:** To provide a means capable of easily assembling a multiscreen display device even in the case of using a heavy display unit.

**SOLUTION:** A video is projected and displayed from the back surface of a transmission type screen 10c by a projector in the display unit 10. The multiscreen display device 100 is constituted by arranging the display units 20, 30 and 40 the same as the display unit 10 crosswise.

Plural rotating mechanisms 21a, 21b and 21c are provided on the base 20b of the display unit 20 arranged on the display unit 10. In the case of assembling the device 100, the display unit 20 is moved to freely slide in a lateral direction on the upper surface of the display unit 10 arranged under the display unit 20 by rotating the mechanisms 21a, 21b and 21c.



## LEGAL STATUS

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] The multiscreen display characterized by to prepare a rolling mechanism in the base of the display unit on two display units which lap up and down, or the top face of a lower display unit in the multiscreen display which puts in order two or more display units which project and display an image with a projection machine in all directions, and constitutes them from a tooth back of a transparency mold screen, and to make the upper display unit movable free [ sliding ] to the top face of a lower display unit at the time of the assembly of the multiscreen display concerned.

[Claim 2] The slot which extends in the sliding direction by said rolling mechanism is established in either the base of the display unit on said two display units which lap up and down, or the top face of a lower display unit. The multiscreen display according to claim 1 characterized by preparing the digit which fits into this slot in the location where the base of the display unit of another side or a top face corresponds, making this slot carry out fitting of this digit, and sliding a section unit same as the above on the top face of other display units.

[Claim 3] Said digit is the multiscreen display according to claim 2 characterized by considering as the product made from Teflon.

[Claim 4] The multiscreen display according to claim 1 characterized by the thing which insert this rolling mechanism in the corresponding point of the display unit of another side of said rolling mechanism prepared in one [ said ] display unit loosely, and which it misses and is established for the bore of business.

[Claim 5] Said rolling mechanism and bore are the multiscreen display according to claim 4 characterized by preparing more than one in the location which does not lap on the straight line of said sliding direction.

[Claim 6] The attachment to the display unit of said rolling mechanism is the multiscreen display according to claim 1 which made desorption free and was characterized by sliding on the upper display unit to a predetermined location, and enabling it to remove it from this display unit after installation on a lower display unit.

[Claim 7] The multiscreen display according to claim 6 characterized by making desorption free by preparing a lug in said rolling mechanism and carrying out the screw stop of this lug from the interior of a case of said display unit.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] This invention relates to the multiscreen display which also puts two or more heavy display units in order easily, and can constitute them.

**[0002]**

[Description of the Prior Art] There is a display of a projection mold as equipment which displays an image by the big screen. In order to perform a big screen and a high definition display furthermore, the multiscreen display which puts in order and constitutes two or more display units of the tooth-back projection mold which projects and displays an image with the projection machine which used liquid crystal etc. in all directions from a tooth back of a transparency mold screen is used. In a multiscreen display, since it is required that the width of face of the joint of the knot of a screen should be narrow, a screen serves as a laminated structure reinforced with the transparent material on the configuration. Therefore, the mass of a display unit becomes large, for example, it becomes the mass of no less than 50kg from 40kg in the screen size of 50 molds. The assembly of the multiscreen display which puts in order and constitutes two or more these in all directions becomes therefore, less easy.

**[0003]**

[Problem(s) to be Solved by the Invention] This invention was made in view of the above-mentioned trouble, and even when using a heavy display unit, it aims at offering a means by which assembly \*\*\*\* can do a multiscreen display easily.

**[0004]**

[Means for Solving the Problem] Even when a display unit is heavy, it is made to be easily assembled, as a rolling mechanism is prepared in the base of the display unit on two display units which constitute a multiscreen display and which lap up and down, or the top face of a lower display unit and the upper display unit can move free [ sliding ] on the top face of a lower display unit at the time of the assembly of a multiscreen display.

**[0005]**

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained using drawing. Drawing 1 is (A) assembly drawing showing one example of the multiscreen display by this invention, the top view of (B) 1 display unit, and the bottom view of (C) 1 display unit. The display unit 10 is projected with a projection machine (not shown) from the tooth back of transparency mold screen 10c, and displays an image. The display unit 10 and the same display units 20, 30, and 40 are put in order in all directions, and the multiscreen display 100 is constituted. Two or more rolling mechanisms 21a, 21b, and 21c are formed in base 20b of the display unit 20 arranged on the display unit 10. When assembling the multiscreen display 100, rolling mechanisms 21a, 21b, and 21c are rotated to the top face of the display unit 10 which turns the display unit 20 down, and it moves to a longitudinal direction free [ sliding ]. Therefore, even when the mass of the display unit 20 is large, it can install in a position easily.

[0006] The slot 22 which extends in the sliding direction by rolling mechanisms 21a, 21b, and 21c is

established in the base of the display unit 20 which turns up. The digit 12 which fits into a slot 22 is formed in the location where the slot 22 of the up unit 20 of the top face of a display unit which turns down corresponds. When assembling multiscreen display \*\*\*\* 100, fitting of the slot 22 of the upper display unit 20 is carried out to the digit 12 of the top face of the lower display unit 10, and it slides on the top face of the display unit 10. a slot 22 and a digit 12 -- the screen side of the display unit 10 and the display unit 20 -- easy -- doubling -- \*\*\*\*\* -- it becomes like. A digit 22 or the fitting side of a slot 12 is considering as the product made from Teflon with small coefficient of friction, and it becomes easy [ the above-mentioned sliding ] further [ it ].

[0007] Rolling-mechanism 21a etc. is inserted and missed to the corresponding point of the rolling mechanisms 21a, 21b, and 21c prepared in base 20b of the display unit 20 on top-face 10a of the lower display unit 10, and the bores 11a, 11b, and 11c of business are formed in it. Screen 10a of the display unit 10 and screen 20c of the display unit 20 stick the upper display unit 20 by inserting rolling-mechanism 21a etc. in bore 11a etc. loosely, after assembling the multiscreen display 100 as a position on the lower display unit 10, and a joint is lost. In addition, before it forms rolling mechanisms 21a, 21b, and 21c and Bores 11a, 11b, and 11c in the location which does not lap on the straight line of the longitudinal direction which is the sliding direction, respectively and a rolling mechanism slides on them to a position, they are made not to be inserted in a front bore loosely.

[0008] Drawing 2 is the (A) top view of the rolling-mechanism part of one example of the multiscreen display by this invention, and the (B) side elevation. A lug 213 is formed in a rolling mechanism 21, and the screw stop of the lug 213 is carried out with a screw 214 from the interior of a case of base 20b of the upper display unit. When assembling a multiscreen display, in the top face of a lower display unit, the vehicle 211 of a rolling mechanism 21 rotates the surroundings of a pivot 212, and is moved to a position free [ sliding of the upper display unit ]. After installing in a position, a screw 214 is removed from the inside of the posterior part case of the upper display unit, a rolling mechanism 21 is removed, and the upper display unit is stuck to a lower display unit.

[0009]

[Effect of the Invention] A rolling mechanism is prepared in the base of the display unit on two display units which constitute a multiscreen display and which lap up and down, or the top face of a lower display unit, and by the upper display unit enabling it to move free [ sliding ] on the top face of a lower display unit at the time of the assembly of a multiscreen display, even when a display unit is heavy, it will come to be assembled easily, and the number of erectors can be reduced.

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**TECHNICAL FIELD**

---

[Field of the Invention] This invention relates to the multiscreen display which also puts two or more heavy display units in order easily, and can constitute them.

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**PRIOR ART**

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[Description of the Prior Art] There is a display of a projection mold as equipment which displays an image by the big screen. In order to perform a big screen and a high definition display furthermore, the multiscreen display which puts in order and constitutes two or more display units of the tooth-back projection mold which projects and displays an image with the projection machine which used liquid crystal etc. in all directions from a tooth back of a transparency mold screen is used. In a multiscreen display, since it is required that the width of face of the joint of the knot of a screen should be narrow, a screen serves as a laminated structure reinforced with the transparent material on the configuration. Therefore, the mass of a display unit becomes large, for example, it becomes the mass of no less than 50kg from 40kg in the screen size of 50 molds. The assembly of the multiscreen display which puts in order and constitutes two or more these in all directions becomes therefore, less easy.

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**EFFECT OF THE INVENTION**

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[Effect of the Invention] A rolling mechanism is prepared in the base of the display unit on two display units which constitute a multiscreen display and which lap up and down, or the top face of a lower display unit, and by the upper display unit enabling it to move free [ sliding ] on the top face of a lower display unit at the time of the assembly of a multiscreen display, even when a display unit is heavy, it will come to be assembled easily, and the number of erectors can be reduced.

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**TECHNICAL PROBLEM**

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[Problem(s) to be Solved by the Invention] This invention was made in view of the above-mentioned trouble, and even when using a heavy display unit, it aims at offering a means by which assembly \*\*\*\*\* can do a multiscreen display easily.

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**MEANS**

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[Means for Solving the Problem] Even when a display unit is heavy, it is made to be easily assembled, as a rolling mechanism is prepared in the base of the display unit on two display units which constitute a multiscreen display and which lap up and down, or the top face of a lower display unit and the upper display unit can move free [ sliding ] on the top face of a lower display unit at the time of the assembly of a multiscreen display.

[0005]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained using drawing. Drawing 1 is (A) assembly drawing showing one example of the multiscreen display by this invention, the top view of (B) 1 display unit, and the bottom view of (C) 1 display unit. The display unit 10 is projected with a projection machine (not shown) from the tooth back of transparency mold screen 10c, and displays an image. The display unit 10 and the same display units 20, 30, and 40 are put in order in all directions, and the multiscreen display 100 is constituted. Two or more rolling mechanisms 21a, 21b, and 21c are formed in base 20b of the display unit 20 arranged on the display unit 10. When assembling the multiscreen display 100, rolling mechanisms 21a, 21b, and 21c are rotated to the top face of the display unit 10 which turns the display unit 20 down, and it moves to a longitudinal direction free [ sliding ]. Therefore, even when the mass of the display unit 20 is large, it can install in a position easily.

[0006] The slot 22 which extends in the sliding direction by rolling mechanisms 21a, 21b, and 21c is established in the base of the display unit 20 which turns up. The digit 12 which fits into a slot 22 is formed in the location where the slot 22 of the up unit 20 of the top face of a display unit which turns down corresponds. When assembling multiscreen display \*\*\* 100, fitting of the slot 22 of the upper display unit 20 is carried out to the digit 12 of the top face of the lower display unit 10, and it slides on the top face of the display unit 10. a slot 22 and a digit 12 -- the screen side of the display unit 10 and the display unit 20 -- easy -- doubling -- \*\*\*\*\* -- it becomes like. A digit 22 or the fitting side of a slot 12 is considering as the product made from Teflon with small coefficient of friction, and it becomes easy [ the above-mentioned sliding ] further [ it ].

[0007] Rolling-mechanism 21a etc. is inserted and missed to the corresponding point of the rolling mechanisms 21a, 21b, and 21c prepared in base 20b of the display unit 20 on top-face 10a of the lower display unit 10, and the bores 11a, 11b, and 11c of business are formed in it. Screen 10a of the display unit 10 and screen 20c of the display unit 20 stick the upper display unit 20 by inserting rolling-mechanism 21a etc. in bore 11a etc. loosely, after assembling the multiscreen display 100 as a position on the lower display unit 10, and a joint is lost. In addition, before it forms rolling mechanisms 21a, 21b, and 21c and Bores 11a, 11b, and 11c in the location which does not lap on the straight line of the longitudinal direction which is the sliding direction, respectively and a rolling mechanism slides on them to a position, they are made not to be inserted in a front bore loosely.

[0008] Drawing 2 is the (A) top view of the rolling-mechanism part of one example of the multiscreen display by this invention, and the (B) side elevation. A lug 213 is formed in a rolling mechanism 21, and the screw stop of the lug 213 is carried out with a screw 214 from the interior of a case of base 20b of

the upper display unit. When assembling a multiscreen display, in the top face of a lower display unit, the vehicle 211 of a rolling mechanism 21 rotates the surroundings of a pivot 212, and is moved to a position free [ sliding of the upper display unit ]. After installing in a position, a screw 214 is removed from the inside of the posterior part case of the upper display unit, a rolling mechanism 21 is removed, and the upper display unit is stuck to a lower display unit.

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**DESCRIPTION OF DRAWINGS**

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**[Brief Description of the Drawings]**

[Drawing 1] They are (A) assembly drawing showing one example of the multiscreen display by this invention, the top view of (B) 1 display unit, and the bottom view of (C) 1 display unit.

[Drawing 2] They are the (A) top view of the rolling-mechanism part of one example of the multiscreen display by this invention, and the (B) side elevation.

**[Description of Notations]**

10, 20, 30, 40 Display unit

11a, 11b, 11c Bore

12 Digit

21, 21a, 21b, 21c Rolling mechanism

22 Slot

211 Vehicle

212 Pivot

213 Lug

214 Screw

100 Multiscreen Display

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[Translation done.]